APHL Environmental Laboratory E-Newsletter, November 2012
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The PHLIP Channel

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US EPA Releases Three Equivalent Methods for Particulate Matter

On October 5, 2012, the US EPA designated three new equivalent methods for monitoring for particulate matter (PM) in air: one for measuring concentrations of PM2.5, one for measuring concentrations of PM10, and one for measuring concentrations of PM10-2.5 in ambient air. The new equivalent methods are automated methods utilizing a measurement principle based on sample collection by filtration and analysis by beta radiation attenuation. More information can be found here.

APHL News

Preliminary Results from 2012 Environmental Laboratory Survey

This summer APHL conducted its second Environmental Health (EH) Survey, sending requests to 128 laboratorians seeking information on the environmental health and media testing and analysis done at their labs. Fifty-three laboratories responded from 45 states and the District of Columbia. While we continue to evaluate the results, here are two interesting statistics: almost half of the responding laboratories do not electronically share data with other public health laboratories or agencies, and over 40 laboratories stated that identifying and monitoring emerging contaminants is a critical issue for environmental laboratories. APHL will release an issue brief on the full results

Upcoming Conferences

2012 Health Effects of Shale Gas Extraction Conference
November 9, 2012,
Pittsburgh, PA

Gulf of Mexico Oil Spill and Ecosystem Science Conference
January 21-23, 2013,
New Orleans, LA

Environmental Microbiology: Control of Foodborne and Waterborne Diseases
January 7-12, 2013,
Atlanta, GA

Pittcon Conference and Expo
March 17-21, 2013,
Philadelphia, PA

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results later this year.

Public Environmental Laboratory Listserv
The Association of Public Health Laboratories maintains a listserv for use by water sector laboratories—the Public Environmental Laboratory listserv. Membership is open to any public environmental laboratory, including utility laboratories, military laboratories, and other government-operated laboratories. To sign up, send an email to: lyris@lists.aphl.org, leave the subject line blank, and put "join aphl-pel firstname_lastname" in the body. Note that this listserv remains open to the public and is not secure.

APHL Issues Accreditation Position Statement
In August, APHL issued a position statement on third party, non-governmental accreditation of environmental laboratories. APHL formalized its view that while there is a role for third-party assessors, governmental agencies should retain oversight and authority over drinking water laboratories, and should not privatize accreditation responsibility. The position statement can be found here.

If you have feedback, news, conferences or courses you would like to list in the E-Newsletter, contact michael.heintz@aphl.org

Federal News

US EPA Issues Revised Guidelines for Water Reuse
Following a three-year process, US EPA issued its third revision of the Guidelines for Water Reuse, originally published in 1980. This third revision includes sections on injection wells, quality assurance/quality control for monitoring programs, treatment technologies for public and environmental health protection, and state regulatory programs.

US EPA Creates "Virtual Beach"
The US EPA, in coordination with several other agencies and stakeholders, created a model to predict contamination of beach and coastal waters. With customized inputs from users, Virtual Beach's models can find correlations between weather conditions, water conditions, and bacterial outbreaks, giving beach managers advanced warning of the kinds of contamination events that lead to swim advisories and beach closures. More information can be found here.

State News

US Geological Society Tests Groundwater in Area with Hydraulic Fracturing Operations

A recent US Geological Society (USGS) study, conducted with the US EPA, tested several monitoring wells around Pavillion, WY for indicators of contamination where hydraulic fracturing is prevalent. The study tested for the presence of inorganic and radioactive compounds; organic constituents; dissolved gases; stable isotopes of methane, water and dissolved inorganic carbon; and environmental tracers. The USGS released two reports, one on the sampling and analysis plan, and a second containing the raw data from the monitoring results where ethane, methane, and phenols detections were noted. This study follows a similar analysis conducted by US EPA in 2011.

Methane Contamination of Groundwater Continues Two Years After Drilling

Two years after natural gas drilling operations stopped in Dimock Township, Susquehanna County, Pennsylvania, evidence of methane contamination of groundwater resources remains. US EPA recently completed six-months of sampling and other analysis. The agency has not formally released the results of the study, which includes over 100,000 pages of material. More information is available here.

Announcements

Scientific Research Publishing Offers Open Access Journals

Scientific Research Publishing (SCRIP) offers a number of open access scientific journals at their website. The site offers over 200 scientific journals on science, technology, and medicine. Selections include the American Journal of Analytical Chemistry and Green and Sustainable Chemistry. The full list of journals can be found here.

US EPA's Water Laboratory Alliance (WLA) Training Center Available Online

US EPA's free Water Laboratory Alliance Training Center welcomes individuals with a stake in the safety and security of water supplies. The WLA Training Center familiarizes WLA member laboratories, WLA users and

water sector stakeholders with WLA response procedures, analytical methods, sample handling recommendations, data reporting, and other supporting tools. US EPA adds new courses to the center on a routine basis.

Information on Helium Shortage Available to APHL Members
The Association of Public Health Laboratories requests information and laboratory actions in response to the growing helium shortage. If your laboratory can share information on how it transitioned away from helium or otherwise addressed the helium shortage, please send it to michael.heintz@aphl.org. Diminished helium reserves result in price increases and supply shortages for laboratory equipment. APHL collects information shared by laboratories in the Member Resources Center, which is available to all APHL members. Additional information will be added as it becomes available.

Upcoming Courses

The following lists upcoming environmental-related meetings and trainings. APHL and the National Laboratory Training Network have many other events planned throughout the year; please visit http://www.aphl.org/training/Pages/default.aspx for a current listing and online registration.

2012 Inspiring Innovation Tour: North America
PerkinElmer is celebrating 75 years by conducting a multi-city, multi-date tour with presentations, local guest speakers, PerkinElmer product and support specialists, challenging activities and more. Learn about the latest applications and technologies in the environmental, food safety and pharmaceutical industries. See specific cities and dates for registration fees and agendas.

National Analytical Management Program: Radiochemistry Webinar - Actinide Chemistry Series
On November 15, Michael Schultz of the University of Iowa will present “Source Preparation for Alpha Spectroscopy.” This webinar will provide a basic understanding of the practical aspects of counting source preparation for alpha spectroscopy. Emphasis will be on solution chemistry for source preparation by electrodeposition and by rare earth microprecipitation techniques. Register here. The next session,

"Sample Dissolution" is tentatively scheduled for December 13, 2012, and will provide a basic understanding of the techniques available for the digestion and dissolution of samples as part of a radiochemical analysis procedure. Dissolution techniques such as wet ashing, fusion and microwave digestion will be discussed and the advantages and disadvantages of the different approaches will be compared. Registration information is forthcoming. Monitor NAMP's website for additional information, registration, and past installments in the series. Free.

Laboratory Quality Control Based on Risk Management

Laboratory instruments can and will fail under the right conditions. Understanding, detecting, and preventing hazards that could affect the quality of test results are the goals of good laboratory practice. This APHL webinar will discuss the new Clinical and Laboratory Standards Institute document EP23—Laboratory Quality Control Based on Risk Management; Approved Guideline. The session will describe common sources of laboratory error and various control processes that can reduce the risk of error to a clinically acceptable level. December 6, 2012. $195.

Using WebEDR for Data Delivery and Review

The first portion of this two-part presentation discusses environmental informatics, standardized electronic data delivery options for data exchange, and the importance of automated data review. The second part describes and demonstrates Web-based Electronic Data Review (WebEDR), an automated web-based system used to upload standardized data for review and exchange. Available until March 9, 2013. Free.

Data Integrity and Ethics for the Environmental Laboratory

Laboratory data supports many environmental decisions. Poor data quality may lead to poor decision-making, resulting in unacceptable risk to human health or the environment, or the expenditure of funds for unnecessary activities. This APHL presentation will demonstrate the importance of proper data integrity procedures in the environmental laboratory. The session will also discuss what situations can lead to a breach of ethical behavior and what should be done if a breach of ethics is suspected or known. March 17, 2013. $115.

Writing Science for the Public

In professional writing and communication, scientists tend to focus on the complexity of their content, rather than accommodating that content for specific, often non-technical audiences. This content focus reflects the rigor that is appropriate to the practice of science.

However, scientists can craft prose that is accurate, while concise and comprehensible to decision making and other non-technical audiences. Available until April 25, 2013. Free.

Conversion of the Agilent EI GC/MSD Systems from Helium to Hydrogen Carrier Gas
Because of the continuing helium shortage affecting laboratory operations, analysts must recognize the differences with using a hydrogen carrier, plan for method adaptation, optimization and validation, and required change to SOPs. This presentation will review steps recommended for converting EI GC/MS methods from helium to hydrogen carrier gas including hardware optimization, analyte stability, consideration for column and chromatographic conditions, and potential change to analytical sensitivity. Archived. Free.

Anions and Metals Analysis in Hydraulic Fracturing Waters from Marcellus Shale Drilling Operations
Ion chromatography is a proven technique for monitoring fracking flowback and environmental waters for impact by salt intrusion. Increased levels of bromide in drinking water intake systems may correlate to higher levels of brominated disinfection byproducts. This webinar will cover monitoring of anion concentrations in flowback and produced waters generated from fracking processes. Thermo Fisher Scientific will present on the typical constituents reported for Marcellus Shale fracking operations, measurements of anion concentrations in water from impoundments used for recycling, and obtaining accurate analytical results for trace metals such as arsenic, selenium, and lead in flowback water. Archived. Free.

Comparison of EPA Methods 300.1, 317, 326 and 302 for Bromate Analysis
There are several approved EPA methods for bromate analysis, EPA 300.1, 317, 326, and 302. As more information concerning bromate toxicity became available, lower regulatory limits were imposed, resulting in demands for lower detection limits. This led to development of postcolumn derivatization and visible detection methods EPA 317 and 326. Though lower reporting limits can be achieved with these methods, they sacrifice robustness and ease of use. Simultaneously, improvements in column chemistry improved the minimum detection limits (MDLs) possible with EPA 300.1. With certain drinking water samples, it is still impossible to overcome matrix effects. Therefore, a 2-D IC method, EPA 302, was recently approved for compliance monitoring to maintain testing ease of use and robustness. In this webinar from Thermo Fisher Scientific, the methods for bromate analysis will be reviewed in

detail along with the necessary steps for validation. Archived. Free.

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